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## The TA2 project – a short introduction

How can technology help to nurture relationships between households? This is the central question addressed by the collaborative research project “Together Anywhere, Together Anytime” (TA2), which started in February 2008.

Many of our enduring experiences, holidays, celebrations and moments of fun and laughter are framed as group events, often family events. This is something that current technology does not address well: modern media and communications serve individuals best. Phones, computers, and electronic gaming devices are usually owned by individuals and provide individual experiences. TA2 seeks to redress this imbalance, by exploring how technology can support group-to-group communication.



*“The goal of TA2 is to make communications and engagement easier among groups of people separated in space and time.”*

Doug Williams, BT, technical manager of TA2

Social letters will be read by many members of a household; games are often played between households working as teams. Memories in the form of videos and photographs are often shared within households. TA2 wants to enhance and support these processes; enabling people to share their stories, pass digital photos and videos around, add comments to them, and to pass them back. TA2 wants to build systems that allow people to play games with each other, seeing and hearing each other as they laugh with and at each other, as they struggle with games like Ludo®, Labyrinth® or Pictionary®. And TA2 also wants to find ways in which modern sensors and IT equipment can support the family to gain better awareness of each other’s activity, whilst maintaining each individual’s right to privacy.

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automatically generated from home-related content, the personal home video, or from the antics of a lively game.

More information is available on the TA2 website: <http://www.ta2-project.eu>

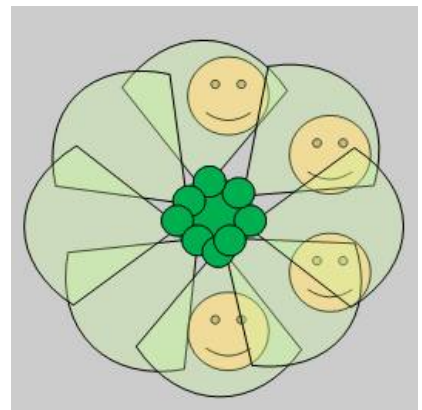


TA2 kick-off meeting held at the premises of Idiap in Switzerland. The meeting gave the team a first chance to meet face to face and to share their hopes and concerns about the project as well as to refine further the project plans. (Photo by Staffan Jonsson, Interactive Institute)

## Audio is crucial for natural communications

It is easy to think that good-quality video will be the most critical element of good audio visual communications experiences. However, experiments have repeatedly suggested that good audio is even more important. TA2 is responding to this insight by working to ensure it delivers the most natural audio communication possible, within the constraints of the network capabilities.

The TA2 audio system aims to include spatial audio signals to exploit multi-channel audio setup of modern living rooms. The Audio Communication Engine which is being developed within TA2 by Fraunhofer IIS is based on the brand new MPEG audio codec "Enhanced Low Delay Advanced Audio Coding" (AAC-ELD). AAC-ELD supports CD-like audio quality at low bit-rates. A further essential component of the Audio Communication Engine is a robust low-delay IP streaming system to ensure best audio quality even under adverse network conditions. It also includes a novel high-quality and low complex echo control algorithm to enable hands free interaction. The Audio Communication Engine is aimed to work with a multi-speaker system in the future. To ensure best intelligibility and surprising effects it will be able to flexibly and seamlessly render remote participants, for example adjust the volume of each participant individually or rearrange them to different loudspeakers.





Immersive 3D-video also adds to the natural communication feeling, but until the Star-Wars holographic conference scenario will be realised, we will have to rely more on our ears than our eyes to provide spatial information.

## TA2 report on design and market insights

In an early analysis of the opportunities and challenges that TA2 faces, we have acknowledged, in our “Design and Market Insights” deliverable that TA2 must be careful in its design approach and in its ambition, to avoid the ‘horseless carriage syndrome’, i.e. the misconception that a car should be designed to be like a horse and carriage but with no horse. TA2 needs to be more than a media-enriched telephone call. New media channels create a whole new genre that transcends the mere combination of existing practices. Several developments underline how promising the TA2 concepts are. The report identifies a number of recent developments: in the gaming industry there is a trend towards casual gaming. Another trend is the popularity of social networking sites and of user-generated content platforms. All these developments illustrate how novel services mixing media and communication in a sensible manner are embraced by a mass audience in a very casual, ad hoc way: Creating togetherness equals informal communication. These current practices show that people use media not only as a conversation starter, but also as a single reference point, the common denominator that defines their relationship in that situation.

Within high-trust personal relationships, the common denominator might be a video that captures shared experiences, or the informal and short personal messages or signals to show that you are simply there. TA2 concepts build on this need for informal communication by creating links to everyday life which might take place outside the living room. Creating an isolated experience in the living room might not prove to be the enriched experience people grew accustomed to. TA2 steps on this bandwagon of creating links between the ‘off-line’ and ‘on-line’ world as platforms bringing input from other sources in and outside the home together.

The public TA2 report “Design and Market insights” is available on the TA2 website at <http://www.ta2-project.eu/deliverables/deliverables.html>

## TA2 design methodology: the user in the centre



Photo by Heidi Velten - [www.kunterbunt.net](http://www.kunterbunt.net)

The design methodology used in TA2 aims to ensure that the project will develop applications and technology which meet real human needs and desires. Techniques such as the development of personas and use cases are embraced and extended within the project so that a user-centred approach can permeate the project. As an early result of this the concept of ‘familia’ has been created within TA2 to have project-spanning descriptions of representative family groups with defined relationships, ages, characters, and motivations. The project aims to use these familia as it designs concept scenarios. Following a planning and design meeting held at the Interactive Institute’s premises in



Sweden, a number of familia have been created. These have since been refined and are being used to populate the concept demonstrators (described below) that have also been developed in the first few months of the project.

The concept demonstrators will be evaluated through field trials with real users. Their feedback will be used to improve the demonstrators, the services, applications and technologies.

## TA2 concept demonstrators

The technology developed for the TA2 project will be used to support five examples of “framing activities”. In these first few months of the project, five concept demonstrators have been chosen that offer significant insights into the requirements for new media experiences among users. The demonstrators developed using the user-led design principles, are first being realised as non functioning concept demonstrators that will be used as illustrations to seek feedback from real users in the next phase of the project. The insights gained will be considered in subsequent stages of the design process. These concept demonstrators will be powered by a suite of componentised capabilities including technology related to audio, video, image processing, and to speaker identification in informal settings; it will consist of content packaging, augmentation and adaptation systems for personalised and scalable information sharing.



### The five demonstrator scenarios:

<b>Remote Playing of a Family Game</b>	One common form of inter-personal social interaction in a home setting is the playing of a multi-person game. These games include familiar “parlour games” such as Monopoly, Labyrinth or Pictionary, but also “traditional” player-centric interaction games such as charades. The TA2 project will develop a game environment that supports game play between two or more teams of players who are situated in different physical locations.
<b>Interactively Sharing and Enriching My Videos</b>	Recognising the importance of looking at media together as a cornerstone for the sharing of family experiences, this TA2 application will provide tools and an infrastructure to help people develop and share short home movies with simple but meaningful interactive narratives automatically generated by the TA2 system.
<b>Child’s Play</b>	In this application we focus our attention on more unstructured forms of creative, communicative and cooperative play for young people, families and friends. This includes providing young children the opportunity to be creative and to communicate safely, easily and effectively with their friends and family.



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<b>Sixth Age</b>	In order to respond to demographic developments, new support and communication paradigms will be studied with a focus on those in the “sixth age”. There is some evidence supporting the idea that games can stimulate the brain and improve older people’s cognitive abilities. Here again, ease of communication and interaction form key components of a successful application that is geared to keeping all members of the family engaged.
<b>Improving social communication</b>	The concepts of shared communication and ‘remote-togetherness’ in a trusted environment of family and friends provides a useful framework for studying social communication between families. By working with groups that know each other well, we will build an application that can make communication easier, more frequent, appropriate and effective.

Videos, Shockwave and Powerpoint presentations to illustrate those concept demonstrators have been developed and are available on the TA2 Web to selected users.

## About TA2

TA2 is a large-scale Integrating Project of the ICT (Information and Communications Technologies) Work Programme under the European Community’s 7<sup>th</sup> Framework Programme (FP7). It was submitted to the first call of FP7 and addresses objective 1.5 (“Networked Media”) under challenge 1 (“Pervasive and Trusted Network and Service Infrastructures”).

The project is partly funded by the European Commission.

TA2 is running from February 2008 to January 2012. Its overall budget is about 18 million euro.

13 partners from 7 European countries are involved in the project.

Further information is available at: <http://www.ta2-project.eu>

**The next TA2 Newsletter is scheduled for July 2009**